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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
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(54) Title: XCRF POLYNUCLEOTIDES AND POLYPEPTIDES AND USES THEREOF

(57) Abstract: The present invention relates to the field of metabolic research. Metabolic disorders, such as obesity, are a public health problem that is serious and widespread. XCRF polypeptides have been identified that are beneficial in the treatment of metabolic disorders. These compounds should be effective for reducing body mass and for treating metabolic-related diseases and disorders. These metabolic-related diseases and disorders include hyperlipidemias, atherosclerosis, diabetes, and hypertension.

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INTERNATIONAL SEARCH REPORT

In International Application No

PCT/JP 03/50081

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K38/17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS, EMBASE, CHEM ABS Data, LIFESCIENCES SCISEARCH, BIOTECHNOLOGY ABS, EMBL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 79454 A (MURDOCH PAUL R ;SMITHKLINE BEECHAM PLC (GB); SMITHKLINE BEECHAM CO) 25 October 2001 (2001-10-25) page 2 page 24 -page 25	1-14
X	WO 02 04600 A (GLAXO GROUP LTD ;SMITHKLINE BEECHAM PLC (GB); SMITHKLINE BEECHAM C) 17 January 2002 (2002-01-17) page 2 page 24 page 27	1-14
P,X	WO 02 48337 A (DUGGAN BRENDAN M;INCYTE GENOMICS INC ; YAO MONIQUE G (US); GRIFFIN) 20 June 2002 (2002-06-20) page 51 -page 53	1-14

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

4 September 2003

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INTERNATIONAL SEARCH REPORT

International Application No.

T/EP 03/50081

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 02 057450 A (MILLET ISABELLE; MACDOUGALL JOHN R ; CURAGEN CORP (US); EDINGER SHL) 25 July 2002 (2002-07-25) page 3 -page 4 page 122 -page 130 -----	1-14
P, X	WO 02 79398 A (CURAGEN CORPORATION) 10 October 2002 (2002-10-10) page 81 -page 84 -----	1-14
A	BERUBE NATHALIE G ET AL: "Cloning and characterization of CRF, a novel Clq-related factor, expressed in areas of the brain involved in motor function" MOLECULAR BRAIN RESEARCH, ELSEVIER SCIENCE BV, AMSTERDAM, NL, vol. 63, no. 2, 8 January 1999 (1999-01-08), pages 233-240, XP002205214 ISSN: 0169-328X abstract figure 1 -----	1-14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/50081

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-14

1.1. Claims: 1-14(all partially)

use of XCRF for the preparation of a medicament for treating and/or preventing a metabolic disease, wherein XCRF corresponds to the amino acid sequence SEQ ID No. 2 and derivatives

1.2. Claims: 1-14(all partially)

use of XCRF for the preparation of a medicament for treating and/or preventing a metabolic disease, wherein XCRF corresponds to the amino acid sequence SEQ ID No. 4 and derivatives

1.3. Claims: 1-14(all partially)

use of XCRF for the preparation of a medicament for treating and/or preventing a metabolic disease, wherein XCRF corresponds to the amino acid sequence SEQ ID No. 6 and derivatives

1.4. Claims: 1-14(all partially)

use of XCRF for the preparation of a medicament for treating and/or preventing a metabolic disease, wherein XCRF corresponds to the amino acid sequence SEQ ID No. 8 and derivatives

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Patent Application No
PCT/EP 03/50081

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